UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

District 5

REPORT OF INVESTIGATION
(UNDERGROUND COAL MINE)

NONINJURY COAL OUTBURST

Virginia Pocahontas No. 3 Mine (ID No. 44-01520)
Island Creek Coal Company
Vansant, Buchanan County, Virginia

March 4, 1987

by

Ronald L. Pennington
Safety and Health Specialist

Originating Office - Mine Safety and Health Administration
P. O. Box 560, Wise County Plaza, Norton, Virginia 24273
Kenneth T. Howard, District Manager

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6-DEV.

Return

7-DEV.

Belt Entry

SKETCH OF NONINJURY COAL OUTBURST

Virginia Pocahontas No. 3 Mine
Island Creek Coal Company
Vansant, Buchanan County, Virginia
March 4, 1987

100'

Abstract of Investigation

U.S. Department of Labor
Mine Safety and Health Administration

Authority—This report is based on an investigation made pursuant to the Federal Mine Safety and Health Act of 1977, Public Law 91-173, as amended by Public Law 95-164.

Section A—Identification Data

1. Title of investigation: Noninjury Coal Outburst

2. Date MSHA investigation started: March 4, 1987

3. Report release date: 4-23-87

4. Mine: Virginia Pocahontas No. 3

5. Mine ID number: 44-01520

6. Company: Island Creek Coal Company

7. Town, County, State: Vansant, Buchanan County, Virginia

8. Author(s): Ronald L. Pennington

Section B—Mine Information

9. Daily production: 6,000

10. Surface employment: 47

11. Underground employment: 212

12. Name of coalbed: Pocahontas No. 3

13. Thickness of coalbed:

Section C—Last Quarter Injury Frequency Rate (HSAC) for:

14. Industry: 7.48

15. This operation: 5.96

16. Training program approved:

17. Mine Profile Rating: N/A

Section D—Originating Office

18. Mine Safety and Health Administration
Coal Mine Health and Safety District No. : 5

Address: Norton, Virginia 24273

Section E—Abstract

On Wednesday, March 4, 1987, at approximately 7:15 a.m., a coal outburst occurred on two chain pillars located adjacent to the tail entry about 100 feet inby Survey Station No. 6357 in the South longwall section (No. 6 development off 5 South). There were no injuries; however, two airlock doors located at the mouth of the tail entry were blown down by the concussion. This caused the return ventilating air current to reverse, carrying the dust generated by the outburst across the longwall face.

Section F—Mine Organization

Company officials:	Name	Address
19. President:	S. Bud Ogden	P. O. Box 11430, Lexington, KY 40575
20. Superintendent:	Jim Mullins	Drawer L, Oakwood, VA 24631
21. Safety Director:	McDonald Hagy	Drawer L, Oakwood, VA 24631
22. Principle officer—H&S:	Danny Deel	Drawer L, Oakwood, VA 24631
23. Labor Organization:	U.M.W.A.	General Delivery, Oakwood, VA 24631
24. Chairman—H&S Committee:	Danny Blankenship	Box 68, Oakwood, VA 24631

COMMENTARY

On Wednesday, March 4, 1987, at 12:01 a.m., the South longwall crew, under the supervision of Jimmy Stiltner, entered the mine and traveled to the active section. Arriving there at 12:35 a.m., the crew checked and serviced the longwall equipment and began production.

Mining continued normally until about 7 a.m. when production ceased because the section belt conveyor shut down. Danny Blankenship, shear operator (tail), located near roof shield No. 100 when production ceased, had been waiting there about 15 minutes when a coal outburst occurred. Blankenship, the closest person to the tailgate entry, was temporarily blinded by the heavy concentrations of coal and rock dust which laded the air current.

Realizing that the air current had reversed, Blankenship started toward the headgate entry using the faceline conveyor as a guide. Shortly, he caught up with McGlothlin, shear operator (head), Steve Davis, jack setter, and Lloyd Deel, jack setter, and they proceeded to the headgate entry. The air current was carrying the dust laden atmosphere into the gob area at about shield No. 30.

On the headgate entry, the crew members met Stiltner and explained the occurrence. Stiltner instructed an employee to notify the surface while he took a self-contained self-rescuer and examined the tailgate entry. By the time he reached the tail entry, the dust laden atmosphere had somewhat settled. He made tests for methane and the area was clear. He also evaluated the roof and checked the direction of the air current. Since the air had reversed, Stiltner travelled the tailgate entry to determine the cause of the air reversal.

Before he reached the mouth of the section, the air current reversed to its normal course. When he arrived at the mouth of the tailgate entry, he met day shift crew members who had reinstalled two airlock doors which had been blown out by the concussion. Meanwhile, the third shift crew members were taken to the surface.

MSHA and the State were notified and an investigation was conducted on the same day.

DISCUSSION AND EVALUATION

The investigation revealed the following factors relevant to the occurrence of the accident:

1. This mine is located in the Pocahontas No. 3 coalseam and averages about 5-1/2 feet in height. The floor in the bump area was dense sandy shale of undetermined thickness that resisted heaving. The immediate roof was a strong sandy shale that was overlain by shale interspersed with sandstone with the overlying strata being approximately 2,000 feet in thickness.

2. The tailgate entry was the immediate return from the longwall section.

3. The mine has experienced bumps and coal outbursts previously. In addition, other local mines in the Pocahontas No. 3 coalbed have experienced coal outbursts.

4. As a result of a fatality caused by an outburst of a larger pillar adjacent to the tailgate entry in a sister mine, Beatrice, Island Creek Company's development plans for longwall mining were modified in this mine in March 1976. The change resulted in the 80-foot by 80-foot load bearing pillar, previously developed adjacent to the tailgate entry, being developed in the middle of the development panel, so that a 30-foot by 80-foot yielding pillar located adjacent to the tailgate entry, would serve as a buffer from the effects of possible bumps or outbursts from the larger pillar. The modified development plan was used in the area where this outburst occurred and is shown on the portion of the attached mine map.

5. The outburst occurred on two pillars adjacent to Survey Station 6384. The inby pillar had been developed 80 feet wide and 100 feet long and the outby pillar had been developed 80 feet wide and 80 feet long. The 80-foot by 100-foot pillar was the largest load bearing pillar on the 6 development panel.

6. The outburst was confined to the load bearing pillars, except for airborne dust, and coal was not expelled into the tailgate entry, indicating that the 30-foot by 80-foot buffer pillar had functioned as planned.

7. At the time of this outburst, the U. S. Bureau of Mines had already initiated procedures to monitor pressure, pillar dilation, and convergence in the No. 7 development panel entries. This research is being done to develop data that may be useful in prevention of bumps in the area.

FINDINGS OF FACT

There were no violations of Title 30 CFR observed which contributed to the accident.

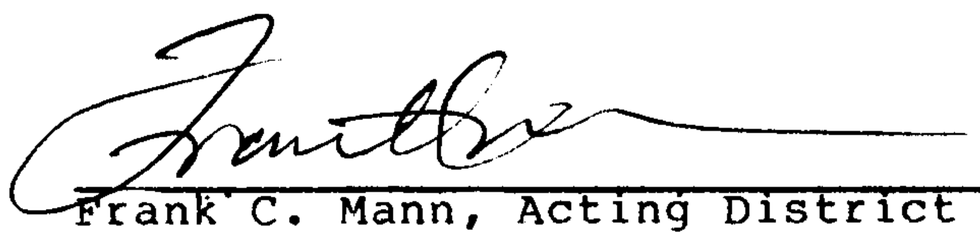
CONCLUSION

The accident occurred because the natural conditions were conducive to bumps and the load bearing pillars were substantial in size resulting in stored energy as overburden pressures were applied as the longwall approached. As a result

the load bearing pillars became overstressed and failed, with suden release of energy, thereby causing the outburst. As a possible contributing factor, one of the two outburst pillars was larger in size than the other chain pillars in this area.

Ronald L. Pennington

APPROVED BY:



Frank C. Mann, Acting District Manager

APPENDIX

List of persons furnishing information and/or present during the investigation.

ISLAND CREEK COAL COMPANY OFFICIALS

Jim Mullins	Mine Superintendent
Eddie Ball	General Superintendent
McDonald Hagy	Safety Director
Leonard Mokwa	Manager of Engineering
Mike Gauna	Strata Control Engineer
Coy Stacy	General Mine Foreman
Danny Deel	Safety Inspector
Jimmy Stiltner	Longwall Foreman

ISLAND CREEK COAL COMPANY EMPLOYEES

Danny Blankenship	Longwall Shear Operator
Lloyd Deel	Longwall Jack Setter
Steve Davis	Longwall Jack Setter
Gary McGlothlin	Longwall Shear Operator

REPRESENTATIVE OF MINERS

George Daugherty	Safety Committeeman

VIRGINIA DEPARTMENT OF MINES, MINERALS & ENERGY

Wayne Davis	Mine Inspector

MINE SAFETY AND HEALTH ADMINISTRATION

Elmer Simmons	Supervisory Mining Engineer (Roof Control)
Charlie E. Walls	Coal Mine Inspection Supervisor
Dillard McGraw	Coal Mine Inspector (Roof Control)
Harold J. Burnett	Coal Mine Inspector
Ronald L. Pennington	Safety and Health Specialist

Mine Accident, Injury and Illness Report

U. S. Department of Labor
Mine Safety and Health Administration

3-17-87 RLR JW 3-10-87 CCM Walls 01

Form Approved, OMB No. 044-R1665, Expires December 1982.

● **Section A – Identification Data**

MSHA ID Number: 44-01520 | Contractor I.D. | Report Category: ☐ Metal/Nonmetal Mining ☑ Coal Mining | ☐ Check here if report pertains to contractor.

Mine Name: Virginia Pocahontas #3 | Company Name: Island Creek Coal Co.

● **Section B – Complete for Each Reportable Accident Immediately Reported to MSHA**

1. Accident Code (circle applicable code – see instructions)
01 – Death 02 – Serious Injury 03 – Entrapment 04 – Inundation 05 – Gas or Dust Ignition 06 – Mine Fire 07 – Explosives 08 – Roof Fall (09) – Outburst 10 – Impounding Dam 11 – Hoisting 12 – Offsite Injury

2. Name of Investigator: DANNY DEEL

3. Date Investigation Started: Month 3 | Day 4 | Year 87

4. Steps Taken to Prevent Recurrence of Accident

● **Section C – Complete for Each Reportable Accident, Injury or Illness**

5. Circle the Codes Which Best Describe Where Accident/Injury/Illness Occurred (see instructions)

(a) Surface Location: 02 Surface at Underground Mine 30 Mill, Preparation Plant, etc. 03 Strip/Open Pit Mine 04 Surface Auger Operation 05 Culm Bank/Refuse Pile 06 Dredge Mining 12 Other Surface Mining 17 Independent Shops (with own MSHA ID) 99 Office Facilities

(b) Underground Location: 01 Vertical Shaft 02 Slope/Inclined Shaft 03 Face 04 Intersection 05 Underground Shop/Office (06) Other

(c) Underground Mining Method: (01) Longwall 02 Shortwall 03 Conventional Stoping 05 Continuous Miner 06 Hand 07 Caving 08 Other

6. Date of Accident: Month 3 | Day 4 | Year 87

7. Time of Accident: 7:15 ☑ am ☐ pm

8. Time Shift Started: 12:01 ☑ am ☐ pm

9. Describe Fully the Conditions Contributing to the Accident/Injury/Illness, and Quantify the Damage or Impairment: Two chain pillar blocks on 6th Dev. South (Tailentry of 7th dev. South longwall), adjacent to the longwall face underwent an outburst of coal causing a brief interruption of ventilation and withdrawal of men from the area.

10. Equipment Involved | Type | Manufacturer | Model Number

11. Name of Witness to Accident/Injury/Illness: DANNY BLANKENSHIP

12. Number of Reportable Injuries or Illnesses Resulting from This Occurrence: NONE

13. Name of Injured/Ill Employee

14. Sex ☐ Male ☐ Female

15. Date of Birth: Month | Day | Year

16. Last Four Digits of Social Security Number

17. Regular Job Title

☐ 18. Check if this Injury/Illness resulted in death.

☐ 19. Check if Injury/Illness resulted in permanent disability (include amputation, loss of use, & permanent total disability).

20. What Directly Inflicted Injury or Illness?

21. Nature of Injury or Illness

22. Part of Body Injured or Affected

23. Occupational Illness (circle applicable code – see instructions)
21 Occupational Skin Diseases 22 Dust Diseases of the Lungs 23 Respiratory Conditions (toxic agents) 24 Poisoning (toxic materials) 25 Disorders (physical agents) 26 Disorders (repeated trauma) 29 Other

24. Employee's Work Activity When Injury or Illness Occurred

Experience	Years	Weeks
25. Experience in This Job Title		
26. Experience at This Mine		
27. Total Mining Experience		

● **Section D – Return to Duty Information**

Answer 30 & 31 when case is closed

☐ 28. Permanently Transferred or Terminated (if checked, complete items 29, 30 & 31)

29. Date Returned to Regular Job at Full Capacity (or item 28): Month | Day | Year

30. Number of Days Away from Work (if none, enter 0)

31. Number of Days Restricted Work Activity (if none, enter 0)

Person Completing Form (name): DANNY R. DEEL | Title: SAFETY INSPECTOR

Date This Report Prepared (month, day, year): 3-5-87 | Area Code and Phone Number: 703-935-7722

MSHA Form 7000-1, Feb. 80 (revised)

For Official Use Only
Degree
Accident Type
Accident Class
Scheduled Charge
Keyword

RECEIVED
MAR 09 1987
M.S.H.A.
Richlands, Virginia 24641

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